

BESIDE THE NEW-MADE
GRAVE

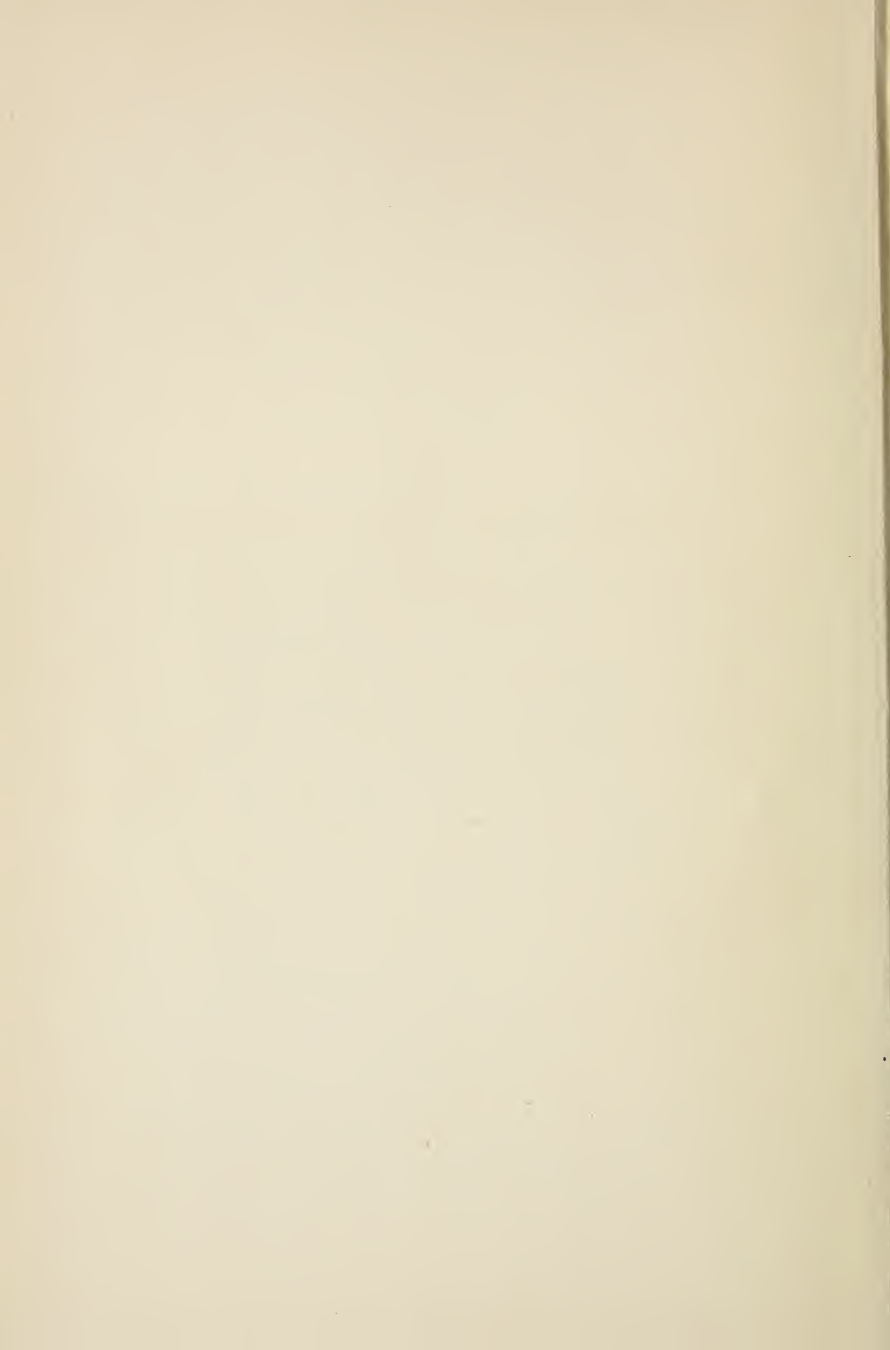


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Grave



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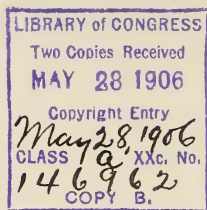
A CORRESPONDENCE.

BY

F. H. TURNER



BOSTON
JAMES H. WEST COMPANY



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Preface

THE aim of this book is to suggest a possible reconciliation between the scientific dictum, *Thought is a function of the brain*, and the religious tenet, *The soul of man is immortal*.

It is written in the hope that, by suggesting a new reading of Nature's scripture, it may comfort those who have thus far found therein no promise of a future reunion with their beloved. The promise is surely there. Rightly read, the great scripture declares the immortality of the soul to be one of Nature's fundamental laws, a corollary from her great "law of substance."

a copy received 27th
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The First Letter

“For we know that if our earthly house of this tabernacle were dissolved, we have a building of God, a house not made with hands, eternal in the heavens.”





Beside the New-Made Grave

I

HILLTON, June 22, 1905.

My dear Friend,—

I DO not write because I hope that any word of mine can give you comfort.

There is no comfort for such grief as yours. But in my own times of need I have never failed to find a certain help in the affectionate expressions of sympathy that have come to me from old friends; and so I write to give you the most earnest assurance of my

love and sympathy and to proffer whatever service it may be in my power to render.

Your son was the most beautiful and the most promising young man I ever knew. That seems a great deal for me to say, who know and have known so many young men. But I have weighed my words. Of them all he was the most beautiful in character, the most promising in every way. There was no thought in him that was not pure and noble, no impulse that was not generous and good. He was fitted to do high work for the world, and, had he lived, high work would have been given him to do.

Had he lived, I said. He does live. Nature does not so mislead us. In him she gave us most abundant promise and her testimonies are very sure. With every year of my life the conviction deepens in my mind that the change we call death is not the annihilation of man's individuality, but merely its transference to new conditions. More-

over, I see good reason to believe that the gate of the grave does not terminate, but only interrupts, those relations of affection which make the happiness of our life on earth.

Possibly, by and by, it may be a solace to you to discuss with me these questions of life, death, and immortality, upon which, for many years, my work has naturally caused my thoughts to dwell. If in that way or in any other I can be of service to you, you have only to command me.

Yours with most affectionate sympathy,

A—— H——



The Second Letter

“Rachel weeping for her children, and refusing to be comforted, because they are not.”



NEW YORK, July 1, 1905.

YOUR tender words of appreciation of my dear son's character are inexpressibly comforting to me; the more so, that in your assurance of his continuing life I find permission to cherish a hope which, until I read your letter, I had supposed myself bound to repress. I was under the impression that science had pronounced thought a mere function of the brain, and had thus ruled out of court the immortality theory. But the fact that you believe in the theory assures me that whatever may be the attitude of science towards it, it is not an attitude of positive denial.

I have never given much time to specula-

tion upon the mysteries that lie beyond the grave ; not, I hope, from any failure on my part to recognize their deep significance, but because I have been so immersed in practical affairs as to have had no leisure for matters which in their nature seemed rather of speculative and future than of practical and present interest. But my son's death has given a new direction to my thoughts ; these problems of death and immortality have now become to me of the most vitally practical and present interest. Therefore I cannot sufficiently thank you for your invitation to bring them to you for discussion. I shall esteem it a very great privilege to receive from you that instruction which only a naturalist is competent to give.

For it is quite clear to my mind that such matters belong wholly in the domain of natural science. I cannot be satisfied with the faith that satisfied my mother and my father. I cannot accept a theory, in itself improbable,

unless it is supported by that kind of evidence which we demand for the establishment of improbable statements in general. The immortality theory is to my mind quite improbable, quite at variance with natural law, and I have never yet heard any evidence in its favor calculated to overcome the presumption against it.

But your letter has roused in my mind a new hope. Perhaps it is my ignorance of natural science that is responsible for my mental attitude. Strong evidence might well seem weak to one unable to comprehend it. Surely you, who have spent a long life in the study and teaching of natural science, ought to know whether or not there is any good scientific ground for faith in a future life. I am going therefore to prove my gratitude for your generous offer by immediately availing myself of it. I wish you would tell me what the attitude of science toward the immortality theory really is, and give me also an outline

of the evidence upon which you base your own belief. I need not say how earnestly I desire to be convinced. I long for my son with a longing that is well-nigh intolerable. If there is any hope, I pray you let me have it. I know I am asking much of one whose time is precious, but your own kindness and my need must be my excuse.

Ever yours truly,

J—— W—— B——

The Third Letter

"Old things are passed away; behold, all things are become new."



3

HILLTON, July 7, 1905.

DO not be afraid of trespassing upon my time. I have large leisure in these my latter years, and there can be no better or more delightful way in which to employ it than in just such discussions as this that you propose.

But do not ask me to get into the compass of one letter the evidence upon which I base my belief in immortality. Old people, you know, are prolix, — inclined to wander off into by-paths when they set out to tell a story. So let me tell mine in my own slow, discursive fashion, no matter how long it may take me. It will do you good to jog along with me through Nature's quiet

paths; she never hurries, and we will take her pace.

But I can tell in one letter all I know of the attitude of science toward the theory of immortality, which, by the way, I think you are quite right in relegating to her domain. With all that relates to the order of Nature science has to do; if the soul be immortal its immortality is a part of that order, and it is for science to show its place therein. To my mind the attitude of one who refuses to indulge a hope contrary to the affirmations of science is a far more religious attitude than that of one who neither knows nor cares how science bears on his faith. For Nature — and Nature includes man — is the expression of God, the One Eternal Energy. To pursue science therefore is to seek after God; to question Nature is to inquire his will; to abide by her revelations is to be obedient to his will.

Science is the strongest bulwark of the

fundamental postulate of religion, viz.: There is One Eternal Energy, by whom and through whom and to whom are all things. This proposition, the greatest truth ever conceived by the mind of man, she has, so far as may be, empirically demonstrated. In the middle third of the last century, the inexplicable Time Spirit roused in the minds of several scientific men in England and Germany suggestions which led up, by way of experiment and inference, to the law that the universe is the expression of One Energy, the same yesterday, to-day, and forever, eternally changeless, though infinitely diverse in form. This discovery, the immortal triumph of science, is simply the verification of religion's first postulate, and is the basis of science as it is the basis of religion. There is one energy, of which all the frame of things is but an expression, declares science. The One Energy of the Universe is God, the Lord Almighty, declares religion. Thus the

grandest discovery of science is seen to be one with the grandest announcement of religion; and more and more, as science grows and creeds broaden, will men come to learn that in Nature lurks not the destruction but the confirmation of religious faith.

The second great postulate of religion, the immortality of the human soul, science has not yet succeeded in establishing on an empirical basis, and hence cannot take account of as a fact. It is simply an unverified hypothesis. The hypothesis originated at a very early period in man's history; as soon, probably, as he rose far enough above his brute progenitors to frame a conception of death. Finding life to be, on the whole, a good thing, he desired its continuance, and, impelled by this desire, he devised the notion that the death he had become aware of was not the end-all for the soul, but merely a transition process by which the individual entered upon a new life in some sort of invis-

ible world, after, in a fleshly form, he had ceased to live in this. That this hypothesis is in fact consonant with the actual order of Nature, man has always had the strongest "will to believe,"* and for it he has sought confirmation from many and strange sources; but never from the source where alone it could be found, — the observed ways of Nature. Indeed, until the discovery of the law of the conservation of energy, a scientific basis for the hypothesis was not possible. Since that great advance in our knowledge, the theory has begun to lose the naïveness which characterized it in earlier times. Cultured men no longer dream of celestial cities, gold-paved and pearly-gated. All such crudenesses have been relegated to the limbo of happy hunting-grounds and mead-flowing Valhallas, and the theory of immortality has been reduced to its lowest terms, viz.: There is a life beyond this life. Now the problem

* Professor William James: *The Will to Believe*.

is to show how that proposition may be related to the unified sum of our knowledge. In other words, there is need of a subsidiary hypothesis which shall enable us to incorporate the immortality theory into the body of our science, as Darwin's hypothesis of natural selection, for instance, enabled us to incorporate the Lamarckian theory of organic evolution.

Science waits for this hypothesis ; for an interpretation of Nature's scripture which shall show how the immortality of the soul fits in with what we know of the great scheme of things. Meanwhile her attitude is an attitude of suspended judgment ; she waits for evidence. This attitude, however, is not without its individual exceptions. There is a considerable number of naturalists whose minds are already made up one way or the other ; men who accept the doctrine of immortality as simply and reverently as did the mothers at whose knees they

learned it ; men who reject it as unqualifiedly as they reject the horned and tailed devil, or any other of the crude conceptions of the child-man. But the uplift in the world's thought which marked the scientific advance of the middle of the last century has so ennobled all thinking that whether men affirm or deny they do it in a large way. Denial has no longer the ring of scorn which degraded it in the eighteenth century and the first half of the nineteenth. That paltry scorn has become a lofty courage, a noble hope, worthy of men whose lives are spent in converse with Nature. The individual must pass, indeed ; but the life he has lived, if lived to high ends, will make for the greatness of the race, and by his death as by his life he will have contributed to the service of man. Nor is affirmance longer a mere "ecstasy of faith." It is a joyful conviction that the evidence of Nature, so far as it has been deciphered, does go to show that when

man's earthly house of this tabernacle is dissolved, a building of God, eternal in the heavens, awaits him.

I see no reason why the phenomenon we call death should continue indefinitely to baffle human research. It is not one of the manifestations of cosmic energy which lie above and beyond human experience. On the contrary it comes into every man's experience and is always close at hand; is something therefore which he is bound to strive to bring into relation with the rest of his knowledge of Nature. Thus far his inquiries have too much ignored the physical side of the process. He has chosen to approach it altogether from the metaphysical side. But for man, at his present stage of evolution, there is no thoroughfare in that direction. He has got to explore psychic processes by means of their physical relations. When he begins to do so, Nature will be quick to answer his questions, and evidence

one way or the other will not be long wanting. I am very firmly of the opinion that the evidence, when it appears, will be found to be strongly corroborative of the immortality hypothesis. Meanwhile, in the absence of evidence, you may believe or disbelieve without setting at naught any dictum of science. She neither requires you to reject the hypothesis nor encourages you to accept it.

Perhaps the best way for us to begin our discussion is for you to define clearly to yourself and to me the grounds on which you are inclined to discredit the idea of a future life. That will give us a starting-point from which to begin our pleasant wanderings through the wide reaches of our theme. My guidance will be indeed inadequate, by reason of my limited powers, but Nature herself gladly teaches the disciple who comes to her with a simple heart. I wish you could come up here among the hills for a few weeks. You

could not help gaining light and inspiration from Nature, living thus face to face with her. Upon these quiet heights, day unto day uttereth speech and night unto night showeth knowledge. Can you not come up?

The Fourth Letter

“Is the law then against the promises of God?”



4

NEW YORK, July 12, 1905.

I CANNOT get away from the city this summer. It is impossible. I regret it the less because of the keen pleasure afforded me by your letter, and by your promise of others in further discussion of the subjects which since my son's death have been uppermost in my thoughts.

I hardly know how to begin the task you have set me, of defining the grounds which incline me to discredit the immortality hypothesis. I have never put them into shape. But has not science reached the conclusion that thought is a function of the brain, and is not the conclusion a virtual denial of the hypothesis? I do not see how the functions

of an organ can survive the destruction of the organ. And that thought is a mere function of the brain seems to me to be proved by the facts of every-day observation. Nobody doubts that a man's power to think depends on the integrity of his brain. I remember to have witnessed once an experiment in which the cerebral hemispheres were removed from a pigeon with the result that, though the pigeon still lived, it lived bereft of such intelligence as it before had possessed. I do not recollect what lesson the professor drew from his experiment, but its bearing upon the question of immortality seems to me pretty plain. I recall also a striking instance in the same line which came under my observation a few years ago. A youth, gentle, kind-hearted, and docile, received a severe injury to the head from the kick of a horse. After a long illness he recovered his bodily health, but he arose from his sick-bed a veritable fiend, — a prey to all vicious impulses, and absolutely

uncontrollable. It certainly seems to have been the brain that made the man in this case. I might — any one might — cite scores of instances pointing in the same direction. From such facts I can see but one inference, viz. : that a man's moral and intellectual possibilities depend wholly upon the structure and texture of his brain, and that, therefore, with the death of the brain, his existence as a moral and intellectual being must cease.

But I am very ignorant of both physiology and psychology. When I understand the evidence upon which your own belief in a future life is based, the matter will very likely appear to me in a new light. You are wise to go slowly, for you will have a good deal to do in the way of preparing the ground. I shall be well content to jog along with you at your own pace and in your own direction. The ways in which you lead me cannot fail to be ways of pleasantness, and I have no desire to shorten them.

The Fifth Letter

“Even the mystery which hath been hid from ages and from generations.”



5

HILLTON, July 18, 1905.

I AM exceedingly sorry you cannot escape from that brick-and-mortar pandemonium of yours into this calm sanctuary of field and wood, where the tranquil earth rejoices continually in the beauty of her being, and one has time to realize how good life is. The sorrowing heart needs more than others the warm bosom of "the great, calm Mother." Men are not sane in cities; they fret and strive and despair. However, we will not quarrel with the inevitable. Since you must stay in the city, we will try to make even that turmoil peaceful by peaceful thoughts.

I think the truth of the proposition, *Thought is a function of the brain*, is quite

generally admitted in the scientific world, but not exactly in the sense in which it was understood by the school of materialists with whom it originated. They meant by it pretty much what we mean when we say, *Digestion is a function of the stomach*. But, in that sense, I do not think it can be regarded as a dictum of science. The relation of thought to the brain is not yet sufficiently understood to justify us in formulating any such dogmatic pronunciamiento. In fact, we know nothing whatever about it. All we know is that when certain molecular changes take place in the cortical cells of the brain, they are accompanied by the phenomena of thought; but what the relation is between the nerve-thrill and the thought nobody knows. There are several theories on the subject, each of which has a tolerable following; but most scientific men are content to wait till the researches of physiologists and psychologists shall have arrived at something definite.

In order that I may give you an idea of these theories, so far as I myself understand them, I must ask you to notice what happens while you are reading what is here written. As your eye travels along the page, first one word or word-group is focal in your consciousness, then another and another, each of these successive foci being the dominant element of a state of consciousness, which lasts but a flash and is gone, to give place to its successor. Not that these states of consciousness succeed each other like a series of electric sparks; they glide on smoothly and continuously, for the reason that the dominant element of each is only a part of its content. The word on which your attention is at any instant focused is by no means all of which you are at that instant aware: the word to come and the word past, your own localized self, the various horrors about you — rumbling of wheels, shouting of hucksters, shrieking of engines, jangling of bells, — all

these are a part of the content of each successive state of your consciousness, and it is these which join together the successive foci, so that the sequence slips smoothly along without a break. This continuous sequence of states of consciousness is your soul. We are accustomed to speak of it as if it were a definite entity, localized in a definite place, from which it might or might not escape. It escapes continually. It slips, it slides, it flows, it cannot stay a moment. It is nothing but a constant stream of change. An instant's pause would be unconsciousness. It has been likened to an onward-flowing wave, the dominant element being the wave-crest, the accompanying sub-dominant elements the wave-body.* The crests rise and fall, the wave sweeps on — whither?

Now, if no trace remained of all this stream of consciousness, you would not be to-day the man of yesterday, of the last hour, of the

* Professor William James.

last minute ; you would have no conscious personal identity at all. But the trace does remain. The wave of consciousness never flows on alone. The psychical wave has its twin, a physical wave which flows on with it. As your eye travels down the page, and word after word impresses itself upon your retina, the stimulus of sense impressions is followed not only by a succession of states of consciousness, but by a succession of molecular changes passing on from cell to cell in certain centers of your brain. Every part of the wave of consciousness has its concomitant in a corresponding part of the wave of nervous activity, and the two waves seem to flow on together in perfect parallelism. It is by this physical sequence that the possibility of a conscious continuance of personal identity is secured. The sequence of molecular changes does not pass and leave no sign as does the sequence of states of consciousness. The cortical substance is modified by it in

such a way that under appropriate stimuli the train of thought accompanying any particular physical sequence can be revived. This constitutes memory, the essential to continuity of conscious identity.

So far we may be said to know. Science has reached this point by inference from observation and experiment. But here our knowledge ends and our speculation begins. What is the relation between the twin waves, the wave of thought and the wave of nervous activity? A relation of cause and effect, reply the materialists. The wave of nervous activity is, they assert, the cause of the thought-wave, as the action of the stomach is the cause of the flow of gastric juice. But this answer is not, I think, satisfactory to a majority even of those scientists who have reached a conclusion.

Of the other answers that have been suggested, two are widely accepted. As we see in imagination the twin sequences flashing

along, every unit in the one having constantly its fellow in the other, the mutual relations never varying, the sequences always retaining their parallelism, it is natural to infer the existence of a single something moving onward, of which these two imaginary flashing lines may be regarded as the two sides; just as, if we saw two points of light moving in the distance in parallel directions, and constantly preserving their parallelism through many, perhaps rapid and marked, changes in direction, we should infer that some one thing was moving along, lighted at both ends. And a large body of naturalists do thus infer with reference to the facts of consciousness. They regard the sequence of transformations of energy in the brain-cells, and its twin, the sequence of states of consciousness, as two aspects of one entity, the relation between them being analogous to the relation between the two poles of a magnet, neither being cause, neither effect. This is my own

view, and though, looked at out of its relations, it seems to negative the idea of immortality, yet seen in its relations, as we must always try to view the processes of Nature, it is, I think, wholly compatible with it.

The other theory, suggested by the great German physiologist, Wilhelm Wundt, denies that the unvarying concomitance of the thought-wave and the nerve-wave is necessarily due to a relation of oneness between them. Instead of one something revealing itself in these two parallel waves, Wundt's disciples prefer to see two somethings held in a constant mutual relation by some means unknown to us. They assert that although a state of nervous activity is always, in our experience, concomitant with a state of consciousness, yet this mere human experience of ours is not enough to justify the inference that the concomitance is essential to the existence of either. On the contrary, they

hold that the relation between the two is such that the physical wave may cease to exist without cutting short the existence of the psychical wave, which may continue to flow on by itself beyond the cessation of its physical parallel.

Other interpretations of the facts of consciousness have been suggested, some approved by naturalists of great eminence; but they are all very transcendental, and, on the whole, I am inclined to regard things transcendental as rather out of the naturalist's line. At all events, they are beyond my comprehension, and therefore it would be useless for me to try to bring them within the comprehension of another.

But you perceive that, as I said at the outset, there is nothing yet known to science which precludes the idea of immortality. We may hold it or reject it and be sure of good scientific company.

I cannot see to write more. The sun has

long since set and it is almost night, — quiet to the eye, quiet to the ear. There is no color in the familiar fields but the gray of twilight, no sound but a distant robin's good-night song. Peace be with you, my friend, peace in the hope of a beauty transcending even this.

The Sixth Letter

"We are but of yesterday, and know nothing, because our days upon earth are a shadow."



6

NEW YORK, July 23, 1905.

BUT, my dear friend, I cannot see at all that "there is nothing yet known to science which precludes the idea of immortality." On the contrary, it seems to me to be precluded by everything you have cited as empirically known to science. Of the three interpretations of the facts of consciousness which you have outlined, only one, so far as I can see, affords any ground whatever for immortality, and that one appears to have been lugged in for the purpose of bolstering up a faith in immortality previously existing in the mind of its originator. I cannot believe it would ever have occurred to any sane man without some such

pointer. The other two are practically one so far as the possibility of immortality is concerned, and that one a flat negative of the idea. If the thought-sequence and the nerve-sequence are inseparable, what difference does it make whether one is the cause of the other or whether they are two aspects of one entity? In either case, the thought-sequence, or soul, must die when the brain dies, and either interpretation falls in perfectly with those facts of common observation and experience which seem so plainly to refute the doctrine of immortality.

But for your explicit avowal of belief in the doctrine, your letter would have quite swept away the hope which, since my son's death, I have found myself cherishing, that possibly my ignorance of natural science may be partly responsible for my attitude toward the question of a future life.

But you have put me on my guard against looking at the facts of consciousness out of

their relation to other facts, and since I am quite ignorant of those other facts, I can only wait for light. Of course, as you must be aware, your position is utterly incomprehensible to me — a mere riddle. You admit substantially that thought is a function of the brain, and yet declare the fact to be quite compatible with the doctrine of immortality. But I know you well enough to feel assured that you hold no opinion without some rational ground, and I wait with the utmost interest for the reading of your riddle.

The Seventh Letter

*“The Spirit searcheth all things, yea, the deep things
of God.”*



7

HILLTON, July 29, 1905.

YES, I have no doubt whatever that practically the soul — or mind, if you choose to call it so — is a function of the brain; neither have I any doubt that the soul is immortal. On the surface, these two propositions appear, as you say, wholly irreconcilable, but they are not so in fact, as I will try to show.

Perhaps the best course for us to follow in seeking this reconciliation is to consider the evidence for each proposition separately. In the process the way to the reconciliation may appear. The evidence for each is, to my mind, very strong, though for the first it is based on observation and experiment, while

for the second it is based on inference from certain facts, which inference, though fairly deducible from the facts, is not necessarily so.

The evidence for the first proposition you yourself have so clearly stated that we need not go over it again. The common facts of observation and experience do, I think, fully justify the inference you draw; though many people, I must admit, would not agree with me. We will, therefore, take for granted, in our discussion, that thought is a function of the brain, at least so far as regards any conditions likely to enter our experience for countless eons of time. The first proposition being thus disposed of, we will go on to consider the evidence — or, more strictly speaking, the argument — for the second.

First, the idea of an abrupt dissolution of that association between psychic and physical modes of energy which constitutes the thinking individual is wholly out of harmony with the general character of Nature's processes

so far as they come under our observation. To postulate such a sudden disruption is, therefore, to hazard a very bold conjecture; bold whether we conceive it to be effected by the annihilation of the individual or by his instantaneous transference to a sphere of life where the One Energy expresses itself in ways inconceivably different from modes of expression known to us. Either conception predicates of Nature an altogether longer leap than she has ever given us a right to expect of her. The notion of the instantaneous transformation of so exalted an organism as a thinking, loving, and aspiring man into a mere lump of inert matter is a notion that savors too much of the miraculous to be entertained by any but the most poetic imagination. Nature, as I have said, does not work in that way. The evolutionary process has not led up to a change so stupendous, a change surpassing in wonder even the birth-transformation. Nor is it less out of accord

with the beautiful harmony of the natural order to assume that an organism no higher in the scale of life than man, an organism thinking, loving, aspiring wholly by means of the apparatus we call his brain, is to be in the twinkling of an eye transformed into a being wholly independent of such an apparatus, a purely psychic manifestation of energy. There may be cosmic worlds wherein energy expresses itself otherwise than through matter, but they can hardly border upon this of ours. Their life-level must be at least as far above our own as we above the protoplasmic slime, and to reach it, therefore, must take as long presumably as for protoplasmic slime-speck to grow to man. It could not be done in the twinkling of an eye. No, the plain inference from all we see of Nature's ways is that the transition from grade to grade of life is a very gradual thing. Hence, as to-day finds you and me not totally different from what we were yesterday, so

to-morrow will not find us totally different from what we are to-day, even though in the interval we should undergo the change called death.. We shall be neither lumps of soulless clay nor disembodied spirits. It is safe to assume that the association between the soul and its twin sequence in the brain is an association for all time, however it may be in realms where time is not. The problem, therefore, of its final dissociation we may as well leave for later consideration, — a few eons hence, say, when a longer life-experience shall have brought us somewhat nearer the realm of spiritual realities.

Again, the annihilation of lofty individuality would be tremendous cosmic waste, and waste is something we have no right to lay at Nature's door. Her apparent lack of economy, like her occasional apparent lack of continuity, is nothing but our real ignorance of her processes. There surely is a patent irrationality in the idea that, after

evolving through patient, age-long labor a creature of such immense life-value as man, she proceeds then to use her precious product merely as stuff for the making of other evanescent individuals, to be in their turn thrown aside as rubbish. Nature is too good an economist for that. Ernst Haeckel says, "The best one can desire after a courageous life spent in doing good according to one's light is the eternal peace of the grave." That is, he wishes to die when he dies. But he cannot be spared. It is one thing to lose from the universe the individuality of a moneron; quite another to lose the individuality of Ernst Haeckel. One moneron will do, perhaps, as well as another; but Ernst Haeckel has reached a point where his individuality has become a cosmic force indispensable to cosmic ends, and he must be content to live on. The individual is a certain manifestation of Energy. What makes the individuality we cannot tell; if we could, we

could tell what God, the One, is. The more complex and the finer the forms of Energy which meet in the individual, the higher and more intense the individuality. As that complexity and fineness increase, the resultant will gradually take on a perfection of individuality, a height of being, such that the energies which meet therein could never do just the same kind or amount of work in any other combination; the individuality of the individual has become a factor which cannot be left out. Hence the annihilation of the individual — of Wolfgang Goethe, say — is unthinkable.

The argument advanced by John Fiske is also well worth considering. He is of opinion that to posit the annihilation of the individual at death is to posit something entirely out of harmony with the natural order. "All the analogies of Nature fairly shout against the assumption," says he. He bases his argument on the fact that it

never seems to occur to the primitive man, nor to any other man except the trained doubter, that death means annihilation. This alleged universality of the belief in a future life is sometimes denied, and recent researches do seem to show that there are tribes which have no idea of an unseen world. But it will probably be found that these are tribes which have not yet risen far enough above the ape to conceive even the idea of death. As soon as men fully realize that they shall die, they begin to construct a scheme for a future life. Practically, therefore, the recognition of an unseen world is universal. This recognition Mr. Fiske explains as an inner adaptation to an outer reality. He argues, starting from Herbert Spencer's definition of life as "the continuous adjustment of internal relations to external relations," that, as the bodily organs have been developed in response to the body's environment, and the social instincts in response to the social environment,

so this development of an out-reaching toward continuance of soul-life must mean a corresponding spiritual environment to which the instinct is an adaptation. "Otherwise we have a relation in which the subjective term is real, and the objective term non-existent, which is something wholly without precedent in the whole history of creation."

This is the main body of the argument in favor of the immortality of the human soul, or so much of that argument as has had any effect upon my own belief. For these reasons — partly too, perhaps, from simple faith, derived I know not whence — I long ago became as firmly convinced of the immortality of the soul as of the dependence of the soul upon the brain. It remained, then, to find means for reconciling these two apparently irreconcilable articles of belief, — to seek in Nature that confirmation of both which I was sure must lurk there.

Your criticisms upon Wundt's theory imply

a certain disapproval of that procedure of mine; as if one might not, as you say, look in Nature for means to bolster up his own faith. But he may construct an hypothesis affording rational grounds for his faith, and, having done so, he may try it upon Nature to see how it will fit. Nature offers no easy reading of her riddles. There she is, and in her is a grand harmony; her "atoms march in tune," each so related to all, and all to each, that were one to lose the rhythm of the march no cosmos would be possible. But as to what the law of that order is she offers no clue. To find it man must fall back on his wits, as Copernicus did when he devised his system of the heavens, as Darwin did when he devised his scheme of natural selection. Once a solution of a world-riddle is offered, she will furnish to the patient seeker the means to test its validity, but she demands first his guess, his hypothesis. Man need look in her for nothing till he knows very

definitely what he wishes to find. Every so-called fact that goes to make up the sum of our knowledge existed first as an hypothesis in the mind of a thinking man; in his "will to believe." He found it in Nature because he looked for it, and he would never have found it in any other way.

Now, I have looked in Nature for confirmation of my hypothesis, and I think I can show you that the confirmation is there, and that to find it you need credit no miracle nor disregard any accepted truth of science; you need only watch Nature at her every-day work. Not that an hypothesis is necessarily worthless because it rests on a miracle. For what is there in our experience that is not a miracle? Certainly not this universe of ours. On rational grounds its existence is an impossibility, yet here it is; and in the presence of this great basic miracle, all other miracles so-called are commonplace. As Huxley said, "In such a universe as ours, anything might

happen." Still, miracles — other than the one ever present — make very unsatisfactory supports for hypotheses, and therefore I am glad I can offer you a quite non-miraculous means of reconciling the immortality of the individual with the necessity of a physical basis for psychic life. The hypothesis may not commend itself to your mind ; what seems clear to me may not seem clear to you ; but it will be pleasant for us to wander together in Nature's large, pure spaces, even if we cannot both see the same aspects of truth.

Lest perhaps you have not found time, in your busy life, to keep up with the record of the advance of science, I will in my next letter, by way of leading up to my demonstration, set forth a few of the facts or generally accepted hypotheses of science which bear upon the subject of our inquiry.

The Eighth Letter

“There is none that understandeth.”



8

NEW YORK, August 2, 1905.

YOUR proposition that the connection between soul and brain is something death does not sever shifts to an altogether new ground the difficulties in the way of my accepting the immortality theory. But I wait your further exposition.

I am very glad you propose to throw a little light on the path we must tread, for I cannot easily overstate my ignorance of everything pertaining to natural science. In my school and college days I learned what little was in the ordinary curriculum, but even that little has now become extremely hazy, and for the most part, I suppose, obsolete as well. Occasionally I hear the chat of scientific men

or glance over a scientific article in a magazine, but practically I am completely ignorant. Do not take for granted any knowledge whatever on my part, even the most elementary.

I have been wondering whether by "*the beautiful harmony of the natural order*" you mean such harmony as exists in the marvelous adjustments of a perfect piece of mechanism. In that sense I too can see a harmony, but not otherwise. To me, in every other sense, the order of Nature seems a very cruel and unbeautiful order; so magnificently adjusted indeed as to quite shut out that notion of "a fortuitous concourse of atoms" of which I used to hear in my college days, but iron-cold, like any other machine. I find nothing in it to which the ethical nature of man can in any way respond. It is a scheme into which the annihilation of the human soul, with all its hope, its nobleness, its aspiration, fits perfectly. True, the bringing to naught

of so great a piece of work as man is cruel and wasteful beyond expression, but so is the plan revealed in the whole life history of our earth ; everywhere the strong preying upon the weak, everywhere evil bearing down good, everywhere wretchedness, pain, and wrong. True, the annihilation plan, in its wholesale and gratuitous cruelty and waste, negatives the idea of a Supreme Benevolence controlling Nature ; but so does the hideous slaughter of innocent, happy human beings, daily done to death in our society by accident, crime, or war ; so does the dreadful cry coming down to us out of the past from cross and rack and wheel and fire ; so does the evolutionary process in all its brutal details.

However, I am very far from being satisfied with my own attitude toward the government of the universe. It has long seemed to me strange that since there is so much love in man, there should seemingly be none

in that First Cause from which man springs.
I am hopeful, therefore, that when your wisdom shall have corrected my ignorance, I shall begin to discern the Eternal Love where now I see but iron law.

The Ninth Letter

“ The eternal God is thy refuge, and underneath are the everlasting arms.”



9

HILLTON, August 9, 1905.

WHEN I was young and lived in cities, the world's cry of pain was so dreadful in my ears, and its sufferance by any power capable of preventing it, so wholly inexplicable that I carefully kept myself from dwelling upon the possible existence of such a power, and sought to study Nature simply as she presented herself to my observation, eschewing all speculation upon what was plainly beyond the scope of a naturalist's research. And I have never of set purpose altered my method. Nevertheless, it was not many years before I found growing within me that sense of the perfection of the natural order as the expression of a Supreme

Benevolence at the heart of the universe, which has been the mainstay of my life. Yet the mystery of evil is as much a mystery to me as ever. I cannot clear up your doubts. I cannot demonstrate the compatibility of a human will to set up a Spanish Inquisition with a divine will to do all things well. I cannot demonstrate the compatibility of the universal cry that shudders up out of Nature's breast with an all-perfect and all-beautiful natural order. Yet, strange to say, I believe in such a will, in such an order. You smile. But it is not altogether the poetic vein in me that finds reason for my faith. We know so little, we can see so little, and the cosmos is so vast! Surely it is not reasonable for us to pass judgment on a whole of which we see so almost infinitely little.

I think you are somewhat inclined, like most of us, to look less at the general prevalence of good in Nature than at the local

absence of good. Yet on the whole, notwithstanding the apparent hardships of the natural order, there is in it far more of the beautiful than of the unbeautiful, far more of good than of evil. Why, then, from certain local phenomena which we call the phenomena of evil, should we deduce the non-existence of an Absolute Goodness, any more than from certain local phenomena which we call the phenomena of darkness, the non-existence of the sun? The sun shines on though night broods upon the earth, and God loves on though sorrow shadows life. We cannot indeed understand the infinite complex of the eternal order, yet we can see, perhaps, that in itself order is good. A universe wherein from the frequent benevolent interference of an over-ruling power the sequence of cause and effect was quite lost sight of, might be a better universe than ours, but the chances are the other way. In an orderly universe we know what to expect of the elemental

forces ; we can predict the behavior, under all circumstances, of fire and water and air, of gravity and heat and electricity ; in a general way, we can foretell the modes of activity of the psychic and physical energies in tiger and snake, in ape and savage. And this knowledge of ours implies the possibility of an ameliorating universe, wherein gradually intelligence shall come to dominate the non-intelligent. But a universe wherein through the kindly intervention of Providence there was no keeping track of the sequence of cause and effect, would not be a universe adapted to the evolution of higher from lower, not a universe of such infinite possibilities as ours, though there might conceivably be in it less of pain.*

The highest truth man has yet deduced from his experience is this : the cosmos is an expression of the One Energy. This we have a right to believe, however materialistic may be our ways of thinking. We have a

* Dr. A. W. Jackson : *Deafness and Cheerfulness*.

right to believe all phenomena to be but modes of that One Energy, all realities, physical or psychical, but revelations of that Infinite One. But evil is not among the things that are. It is negative. It is merely absence of good. Love is, truth is, goodness is. But what is hatred? what is falsehood? what is wrong? Negations all; not modes of the One Energy, because only realities can be modes of reality. It is in the things that are — in beauty, in love, in wisdom — that we look for indications of God; not in deformity and wrath and wrong. God is the sum of all, as he is the source of all, and therefore each least thing that really is is indicative, so far as it goes, of the great whole of which it is a part. By and by, in worlds to come, as we go on in life, we shall see grander indications and rise to an ever more and more adequate conception of the Eternal One. Now we are young and weak, and this one truth is all we can grasp: that

whatever intimations of absolute goodness are suggested in us by the good we see in earthly creatures, whatever suggestions of beauty are awakened in us by the beauty we behold in our environment, those intimations, those suggestions are glimpses caught by our child-eyes of the Absolute Goodness, the Absolute Beauty of that Being which only the whole cosmos can adequately express. I cannot prove that blessed Presence. I cannot reconcile it with the woe of the world. But what am I that I should? I trust.

This prelude to the promised subject-matter of my letter has so lengthened itself out — pardon my prolixity — that I think I will stop here, and send you this as it stands, by way of answer to your doubts and queries, and to-morrow morning we will begin our brief survey of cosmological science.

The Tenth Letter

“Of old hast thou laid the foundations of the earth : and the heavens are the work of thy hands. They shall perish, but thou shalt endure : yea, all of them shall wax old like a garment ; as a vesture shalt thou change them, and they shall be changed : but thou art the same, and thy years shall have no end.”



IO

HILLTON, August 10, 1905.

It is true the cosmos of to-day's science is a very different thing from the universe of your college days, the early sixties. Some of the things that go without saying now were hotly contested then. The law of the conservation of energy had not fairly leavened the world's thought, the spectroscope and the camera had not yet told the secrets of the stars, the evolution theory was anathema in many quarters and imperfectly understood everywhere, and it would not be far wrong to say the whole structure of biological science was yet to build.

The enormous broadening, during the last

half century, of the scientific conception of the cosmos is due largely to men's constantly growing perception of the infinite implications of the law of the conservation of energy. Physical science was born anew in those wonderfully simple experiments by which, in the forties, Joule demonstrated the transformability of mechanical energy into heat, and the subsequent experiments and generalizations which led up to the promulgation of the grand law: all forms of physical energy are inter-transformable and hence are One Energy, the same yesterday, to-day, and forever, changeless in totality and nature though diverse in form.

The men were few who, so early as the sixties, realized the deeps into which the tremendous statement opened. Even yet we are hardly awake to its full import, but the workings of its sublime monism have gradually leavened the thought of our time until a tendency toward a monistic interpreta-

tion of all phenomena has come to be the most distinctive feature of our science.

The experiments of Joule and his compeers dealt only with physical forms of energy, but the monistic impulse imparted by their discovery speedily outstripped the slow processes of experiment and led men into the contemplation of a grander cosmos than they had dreamed of ; a cosmos whose foundations were empirically revealed indeed in the work of the formulators of the law of the conservation of energy, but whose mighty whole embraces realms psychic as well as realms physical, and thereby becomes a true expression of the Infinite Energy which is its source. About this notion of energy expressing itself in infinite change, psychic and physical, the cosmos of modern science is built up.

As to the Primal Existence and the genesis of things, those are mysteries with which science may not cope ; thought in those directions is merely speculation, and the

speculations of scientific men vary, like those of other men, according to the temperament of the individual. The primary conception of science is the conception of infinite substance occupying all space and thrilling with a ceaseless motion which reveals the presence of infinite energy. Some thinkers regard matter and energy as co-existent from all eternity. Of these, one school makes a distinction, not intelligible to me, between substance and matter, regarding energy and matter as attributes of substance. But to my mind the better philosophy is that form of monism which sees in energy the sole primal existence, that which was from the beginning and shall be forever, that from which matter with all its phenomena is but an evolution. Of this primal evolutionary process we have no least conception; but somehow the wondrous change is effected, somehow the One Energy translates itself into the one substance, and by its ceaseless

shiver the cosmic substance proclaims the presence of the Primal Life. This One Eternal, religion names the Living God.

The ceaseless thrills or waves of motion in the cosmic substance we call physical forms of energy ; energies, that is, which reveal the Eternal Energy under the form of motions in matter. Though only a comparative few of these modes of motion enter our experience, they are infinite in number and variety. Yet this infinite diversity our science has revealed as infinite oneness, since in their timing a subtle harmony exists such that without jar or friction one can merge into another, can, as it were, lose itself in that other. Psychic forms of energy are revelations of the One Energy otherwise than as motions in matter, though, so far as our experience goes, they are inseparably associated with those motions. What the nature of the association may be we do not know, since we do not know how the One Energy translates

itself into the one substance. Ignorant of this basal cosmic process, we fail to connect the psychic forms of energy with that great circuit of physical energies revealed to us by the discoverers of the law of conservation of energy. But in the Eternal Mind the connection is made. Our finiteness knows only how the heat of the forge is one with the flash of the lightning, the glory of the sunlight, the thunder of the cataract; but the Eternal knoweth how it is one with the white grace of the lily and the sturdy strength of the oak, one with the joy of leaping and singing things, one with the thought, the love, the rectitude, the aspiration of man.

To the mysterious association of physical and psychic energies constituting between ourselves and our environment the relation of perceiver and perceived is due all our knowledge both of ourselves and of our environment. All that our human speech can name, all that our human consciousness affirms, is simply

this relation of perceiver and perceived ; for all we know is motion, and that by which we know is motion. But we cannot represent in thought a world thus constituted. The human mind has not yet reached a stage of development adequate to a realization of truths which nevertheless it can formulate in words. If we should succeed in bringing clearly before our minds even such a conception of these mysteries as may attend the verbal formulæ by which science tries to represent them, we should walk as in a dream, our world would be a phantasmagoria. Therefore we need not try. One thing at least we know, and that is that whatever we may be, and whatever our environment may be, and whatever the relation of the two may be, at least we are to ourselves very solid realities, standing in a very thinkable relation to a very real environment. Nature does not juggle with us. The existence — to us — of her everlasting hills may be due

to certain marvelous adjustments on her part; none the less, the hills stand firm in the perfection of those adjustments, and we need not trouble ourselves with mysteries beyond our grasp. We may as well take our world to be simply what it appears.

The red rose, for instance, looking in at my window: now, I know that rose is only an aggregate of variously moving molecules, visible to me, another aggregate of variously moving molecules, in virtue of certain correspondences between its molecular motions and the molecular motions of my sight organs, and recognized by me as a rose and as beautiful in virtue of certain other correspondences with molecular motions in the association centers of my brain. But to me it is nothing of the sort; to me it has no motion except as the wind sways it; it is simply a red rose, and as such I rejoice in its beauty and am thankful to the embracing Nature which has given it birth. I look out

from my window upon the quiet country-side wherein God gives me in these my latter years to dwell. I know it is just a bit of a swiftly moving sphere, which, whirling on itself, rushes forward along the tremendous curve of its path about the sun, and with the sun about a vaster sun, and so on into a complex of motion in whose mazes the imagination loses itself. But I am content not to realize this unrest, this speeding through abysmal space. I am content to behold nothing but the calm of perfect peace. The early morning flushes all my fields with a golden glory prophetic of the sunlit hush that shall brood upon them at noonday, and the tranquil shadows that shall make beautiful the eventide. Looking upon them, the beautiful words of the psalmist, sweet with old-time associations, rise in my memory, bringing their familiar blessing: "*He maketh me to lie down in green pastures, he leadeth me beside the still waters.*" The stillness may be only

a relative stillness, but to me it is real. I think I am at rest, therefore I am.

We will talk of our material universe, then, as if it were what it appears, since what it is is not thinkable. As Herbert Spencer said years ago, "all speculations respecting the constitution of matter commit us to unthinkable conclusions."

The prevailing theory as to that constitution is still the theory of atoms, which you were taught in your school days. It will do as well as another, though others have been suggested, because the chief use of any such theory is to bring within reach of our thought and speech things which in themselves are unthinkable and unspeakable. Also it appears more consonant with so much of the system of things as is open to our knowledge, in that it recognizes that principle of individuality to which Nature seems constantly striving to give expression. The atom is one as the Cosmic Energy is one. No finest

chemistry of ours has ever fused two atoms. Like the human soul, each has yearnings towards its fellows; like the human soul, each, its yearning forever unsatisfied, goes on its solitary way and does its cosmic task. When two or more atoms draw so closely together that the body formed by their proximity is in a manner stable, they make a molecule, and from the union of molecules are built up in like manner the crystal and the sphere.

Science has become strongly of the opinion, however, that the old idea of the indivisibility of the material atom can only be true so far as the resources of our chemistry are concerned. Doubtless "no man ever split an atom," and perhaps no man ever will, — a true atom, at least. But it does not follow that Nature cannot and does not accomplish the feat. The ultimate atom of our matter can be nothing more than an aggregate of atoms of some finer kind of

matter. This conception consists far better with what we know of Nature's ways than does the old conception of the atom as an ultimate. Nature knows nothing of ultimates. Still, at every seeming barrier, with infinite, gentle invitation, smiles the beyond.

From the atoms, whatever cosmic processes may have gone to their making, have been and are being evolved the nebulous masses of our universe, and from these, in turn, our multitudinous spheres. These we conceive of as grouped into systems, moving in mighty orbits through space, and made one whole by means of a tenuous substance, through which waves of influence are transmitted from sphere to sphere determining the order of the spheric march. These waves of influence you will recognize as modes of motion in the cosmic substance, and this tenuous medium, from which all cosmic structures have been evolved, as the cosmic substance itself.

It is into the deeps of this substance that the gaze of science is to-day most eagerly and intently directed. We call it the ether. It is the embosoming substance in which our suns and systems are borne as in a sea. It pervades all the spaces of our universe, interstellar, inter-molecular, inter-atomic, forming within every material body a finer body, invisible but no less real than the one our eyes behold. In this ethereal space-filler lies hidden, we believe, the solution of many of the problems which now baffle our comprehension. Its existence in Nature was discovered because a good guesser looked there for it in order to account for the phenomena of light, and for years it was regarded merely as a convenient means for light transmission. Now, science sees in it a means of transmission for all the physical forms of energy and a realm of unimaginable possibilities. In one way its existence is still hypothetical, since it in no way manifests itself

to our senses however aided ; in another way it has ceased to be hypothetical, in that we have harnessed it to our machines and made it serve our needs in various ways.

The rhythmic vibrations of the cosmic substance, of which the vibrations of our atoms may be regarded as typical, are revealed everywhere throughout the cosmos, so far as we know the cosmos. Everywhere, even in the solar systems, we see or conceive this universal rhythm of change. All about us are solar systems coming into being, as ours came millions of years ago ; systems yielding up to cosmic transformation their stores of energy, as ours is yielding hers ; systems already become, as will ours, inert and cold ; and systems crashing, as in the fullness of time will ours, into tremendous ruin, generator of that fierce passion of transforming energies out of which shall spring a new birth wherein the great rhythm shall begin anew.

The first glimpse of the law of evolution —

the complement of the law of the conservation of energy — was discerned by Immanuel Kant about the middle of the eighteenth century. He perceived that the solar systems of our universe had been evolved from primal matter by the slow aggregation of atoms, first into nebulæ, then into spheres; and his theory, mathematically established by the great French astronomer Laplace, is still the most widely accepted method of accounting for the inception and building up of our universe. About fifty years later, the second intimation of the law was revealed to the mind of the French naturalist, Jean Lamarck. He discerned the working of the evolutionary process in the multiplicity of organic species, but failed to discover the steps in the process. In the thirties of the century just closed, the English geologist, Sir Charles Lyell, carried on Laplace's story of the evolution of suns and planets by showing how one of those planets had built itself up from an incandescent,

rotating mass into a fit abode for living things. But it was not until after the discovery of the law of the conservation of energy that the great law of evolution, in its completeness, dawned upon the elect mind. In a monumental series of treatises, the publication of which was begun about the middle of the last century, Herbert Spencer welded into a great philosophic system those fragments of the cosmic process which his predecessors had discerned, and revealed to man the basic truth that all Nature is a continual becoming ; that the cosmos, through all its realms, is a constant cyclic evolution of higher forms from lower. In its influence upon scientific thought, this discovery has been second only to the discovery of the conservation of energy. A little later, in 1859, Charles Darwin filled the gap in Lamarck's discovery by showing how the law had worked in the development of organic species, and thus transferred the whole

subject to a new plane. Men now found the evolution theory to be invested with a personal interest, and thus what had been a matter appealing chiefly to the learned became the absorbing question of the day.

Darwin's work did for biology what the discovery of the law of the conservation of energy had done for physics. More, even; for before Darwin the sciences of zoology and botany had been mere gropings after a classification impossible without the key. Darwin supplied the key in his hypothesis of natural selection working on variations somehow arising, and the splendid modern development of the science of biology is the result. He showed a practical way by which Nature could have accomplished the immense amount of work involved in the developing of the great number of organic species upon our earth from one or a few primary stocks, and also made it reasonably clear that she had in fact done so.

This wonderful achievement of Darwin's instantly flashed into the minds of men the perception of oneness in Nature, from atom of matter to majesty of man, thus supplementing the discovery of the persistence of energy. The perception came with a shock, so at variance was it with the quaint Hebrew traditions which had somehow got entangled with men's understanding of that kingdom of God which Jesus preached, and had thus, oddly enough, come to constitute a seemingly organic part of the Christian religion. You remember the clamor of those early years, "the thunder of the captains and the shouting." It has mostly died into silence now. The master had done his work so well, had spent so many years in satisfying himself of the truth he taught, had accumulated such a store of observed facts, had recognized and disposed in advance of so many apparent objections, had, in short, made the whole matter so absolutely self-evident, that there

was no escape from his conclusions. In his first book, as you doubtless remember, he made only a passing allusion to the obvious application of his theory to the descent of man, but the inference from his facts was irresistible. The truth was so plain that he might read who ran, and the world read it.

Less than fifty years have passed since the publication of *The Origin of Species*, and already we are, for the most part, well content to believe that man is nothing but an evolution from brute progenitors, his wonder-working brain only a development from primitive neuroplasm in some poor, despised sea-creatures of the primordial period. Only a development, I said. It was a poor thing to say. I know of nothing which so clearly proves the wisdom we see in each other to be one with the Universal Energy, as the wonderful process of Nature which, out of protoplasmic slime, has evolved the thinking

man; nothing which manifests with such unclouded splendor the omnipotence of the Living God, as this life-story of humanity.

The work of Darwin and Lamarck did not touch the problem of the origin of the protoplasmic compound and the first darting of the life energy through it. Our life remains a mystery. But it is only one of many, and perhaps we lay overmuch stress upon our ignorance in this particular; such stress, indeed, as seems to imply a knowledge on our part of the origin of every form of energy but this. Really, we know nothing whatever of the relation between the One Energy and its expression, the one substance. For instance, we have no idea why the energy of magnetism should invariably manifest itself in connection with the substance we call lodestone, nor why certain substances are better conductors of electricity than certain other substances. We know only the fact. In the same way we see that when Nature

has produced a certain carbon - compound, peculiar in the great number of atoms to its molecule and in its great molecular instability, this compound becomes capable of manifesting a form of energy differing by an apparent gulf from other forms. This difference consists in or results from a capacity, on the part of individuals evolved from protoplasmic matter, of effecting, by means of molecular changes, a response, as it were, to their environment, in virtue of which they become capable of registering experience, and are hence rendered educable. This peculiar form of energy we call life. Why it should never manifest itself save in connection with protoplasm we do not know. In this, as in all other matters that concern the relations of matter and energy, we must rest content with the fact.

Attempts have been made more than once during the last fifty years to produce an article of protoplasm as good as Nature's, but they

have failed. They always will fail. No chemist, however ingenious, will ever succeed in producing a substance that will stand the protoplasmic test: the power to thrill with the breath of life. There are some things Nature alone can do; this is one. Probably the conditions that made it possible for her to produce her wonderful compound exist no more upon earth, but they certainly existed once, for there is life now and time was when there was none. The evolution of the living from the non-living must therefore have been somewhere effected in Nature's laboratory; though, perhaps, I ought to make this statement rather as an expression of my own opinion than as an unquestioned fact. It is a point on which scientific men disagree.

The evolution of the organic unit, the primary cell, having been once achieved, the new capacity of response to environment, of educability, brought about slowly and gradually the evolution of individuals possessing

the capacity in ever higher and higher degree, until at length the microscopic cell became the man who told its story. This work was accomplished by various agencies, but mainly, as Darwin taught and as a majority of naturalists believe, through the selection by Nature of individual variations, arising we know not how. Just as the horticulturist, by a process of skillful selection, produces in a comparatively short time, from a single faintly-colored flower, a gorgeous thing of many-petaled beauty, or the farmer, from a fortunate variation, a new and valuable breed of cattle, so Nature, working unintermittingly through millions of years, has, from a lowly primary stock, brought forth upon the earth the myriad tribes of living things, with thinking man, their king.

The very lowest of our ancestral forms we know nothing about. But probably somewhere near the beginning of the line appeared a one-celled creature resembling the amoeba

of our own seas and lakes. The amoeba is a creature so low in the scale of life that, though it feeds and grows and moves and reproduces its kind, it yet has no specialized organs. Its whole soft body flows over its food, contracts into a round ball when touched, moves itself by a sort of flowing-out of its shapeless mass here and there into foot-like processes, and reproduces itself by simply splitting in two. All this we used to do ages ago in primordial seas when we were one-celled creatures like amœbæ. But no two of us were exactly alike, more than two plants are, or two babies, and at length a variation occurred, favorable to progress, under conditions which enabled natural selection to act upon it. At once Nature seized the chance, and after a time, a long, long time, succeeded in producing something higher than an amoeba, something like a sponge perhaps, or a coral, with body consisting not of one cell but of many. Plainly

the evolution of this many-celled but still homogeneous creature was the initial step to a creature cell-specialized, heterogeneous, fitted for a physiological division of the labor of life. Accordingly, ere long, this higher creature appeared, and in time took on a form showing the first faint beginnings of separate nerve-tissue. This accomplishment being full of promise, Nature kept unceasingly at work upon it till at length she had evolved a worm-like thing, in which the neuroplasmic cells were in a manner centralized. And now these worms, these far-back ancestors of ours, having in their centralized nerve-system found the path leading to manhood, straightway began to "mount through all the spires of form." They developed a spinal cord and a brain, a backbone and a skull; became fish-like and breathed through gills, frog-like and breathed through lungs; left their watery home and, in a new environment, learned to give suck to their young, thereby originating

the evolution of sustained maternal love, the basis of the higher life.* Thus equipped for nobler destiny, they went forth against the foul reptilian brood which darkened the earth, and after long battle overcame it and entered into its heritage; then, in this better world that they had made, they mounted upward still and upward, till finally, achieving apehood, they thought, they loved, they were ready to be men.

So far as regards bodily structure, the man-shape was practically reached when apehood was achieved, but the development along psychic lines has since been so enormous that, though the structural difference between the highest ape and the highest man is comparatively slight, the psychic difference between the two is myriad-fold greater than the psychic difference between the ape and the amœba, notwithstanding the fact that the lapse of time from ape to Shakespeare is

* John Fiske: *Through Nature to God*.

less, probably, by millions of years than that from amœba to ape.

Somewhere in the middle tertiary an ape developed who varied from his kindred in the possession of certain brain-centers whereby, in a crude, imperfect fashion, he was able to effect an association of the various ideas presented to his consciousness, into definite trains of thought. At this point he began to cast off apehood, but he was yet far enough from manhood. Still a very apelike creature, he climbed about in his arboreal home, and by grunt and squeak and chatter communicated his thoughts to his fellows. Ever better and better he and his fellows understood one another, till at length the fateful moment came, — he spoke, and then and there the ape became a man. Crude and imperfect enough his speech, low and poor enough his type of manhood, but it was speech and it was the speech of man. Nobody believes that man is descended from

any of the extant apes, only that man and the extant anthropoid apes had, ages ago, a common ancestor.

One of the testimonies which Nature bears to the truth of this theory of the descent of man is found in the fact that the embryonic development of the human being is a recapitulation in brief of the successive stages leading from unicellular creature to man. Not, of course, that the process can be traced in every minute particular; all the changes of millions of years cannot be crowded into a few months. But the record, although, like the story of the rocks, more or less blotted and obscured, is yet, like that story, so plain that there is no mistaking it. I see not how any sane man, reading the record, can deny the patent fact that man originated in lowly one-celled organisms which lived upon our earth while yet the waters covered it, and that he has developed along the same lines by which all other mammals

have reached their mammalian estate; surpassing them simply because his line had in it greater possibilities than theirs, — surpassing them, as I believe, because thereby was worked out the all-wise purpose of the Eternal Energy.

The lines of evolution within our knowledge, whether organic or inorganic, are lines of type evolution. Of the evolution of the individual, except during one transient period of not more than eighty or ninety years' duration, we know nothing, since the knowledge would imply a more extended life-experience than our earth can afford. Even upon our earth, however, we can trace one line of individual evolution which, though it may not bear directly on the Christian doctrine of immortality, is yet not without value as a means for better comprehending the man of to-day. Let us think back for a moment along the life-track of any individual, — say King Edward Seventh. In 1841

King Edward was a tiny bit of protoplasm lying in the protecting matrix of a being, of whose body that bit of protoplasm was a constituent, living part. The cell had indeed been modified, to the extent of half its substance and potentiality, by fusion with another cell, but it was nevertheless a constituent part of the parent that nourished it. That parent having been likewise a constituent part of her parent, that parent of hers, and so on backward through the life-track to some one-celled creature of primeval seas, it follows that the body of that one-celled creature is, in a certain sense, present in the body of Edward Seventh to-day. Never has there been an instant when the individual which originated in that primordial lump of protoplasm has ceased to live, although, since the introduction of the dual system of reproduction, it has again and again sunk, in the germ, to infinitesimal proportions. This assertion of identity between the individual

creature of immemorial ages back and the individual man of to-day seems like speculation, so wonderful is it; but if you reflect a moment you will see that it is only a plain statement of a fact,—a fact which, well-weighed, will greatly aid the student of social science in the interpretation of human nature and human action.

Whether or not our own solar system is the only one upon which life and thought exist, we, of course, have no present means of ascertaining. It is indeed regarded as improbable that any of our sister planets are adapted to the support of life; but however that may be, the immense number of solar systems in our universe renders it quite incredible that, among them all, only one, and that one not in any perceivable respect extraordinary, should be the seat of life. Common sense would seem to teach us otherwise.

I think I have told you now all you need to know in order to understand how the

theory of the immortality of the soul fits into the scheme of things. You will notice that the view I have given of the cosmos is, for the most part, speculative; but so, in large degree, is all our so-called knowledge. The present domain of science is infinitely little compared with the immensity beyond. That beyond is open to research and conjecture. Year by year new hypotheses will be devised and empirical means for testing them enlarged. But to-day the cosmos of science is, in the main, a conjectured cosmos. Still we walk in mystery almost as complete as that which closed about the primeval man, and still, like him, we seek to read the riddle of the universe. But we may have faith to believe our guesses to be nearer the mark than his, because of the centuries that lie between, centuries wherein has shone unfailingly the light that shone for him, the light that shineth more and more unto the perfect day.

I have written pages enough to amount to a treatise rather than a letter, but I will give you time to digest it before I write again. Much of it you very likely knew to begin with, despite your own conviction of ignorance, so the work of digestion may not be so very large a task.

The Eleventh Letter

“Lo, he goeth by me, and I see him not.”



I I

NEW YORK, August 14, 1905.

THESE are large, calm thoughts on which you feed me. I can understand why it is that about the few great scientific men whom I have met there has always seemed to be a certain atmosphere of serenity, like the serenity of sunny hills in autumn. There is indeed no room for fretting cares or personal anxieties in minds habitually occupied with large, impersonal thoughts. Life becomes to such no feverish strife for petty ends, but a calm participation in the mighty works of God ; death no dreadful catastrophe, but a mere incident in the great progression of Nature.

I have begun to realize the absurdity of

conditioning my acceptance of the immortality theory on my ability to understand its physical possibility ; as if, forsooth, nothing could be reasonable that transcends the capacity of my own poor reason. The words I used to hear so often in the old times from my mother's lips come home to me with a new significance,—"With God all things are possible." In my self-sufficiency I have been inclined to set them down as the mere phrasing of a beautiful fancy, but now I have come to comprehend in them a cosmic truth ; the same truth which Huxley's aphorism expresses, though not so adequately, because less loftily : "In such a universe as ours anything may happen." But while I no longer condition my acceptance of the theory on physical demonstration, I am eager, nevertheless, for the demonstration.

I fear, however, that my habits of thought and the necessity I am under, in my business, of weighing evidence and getting very clearly

in my mind the sequence of things, puts me at a special disadvantage in the attempt to conceive such a world of motion as you have outlined. Since it is the creed of science it would be presumption in me to scoff at it, yet my utter inability to frame any conception whatever, answering to the verbal statement, induces in me a feeling of unreality at the heart of things. We are indeed such stuff as dreams are made of, and our little life, if it be not rounded with a sleep, goes on from dream to dream. Doubtless this sense of unreality springs from the narrowness of my knowledge. When I see somewhat further into the depths of which you have given me a glimpse, perhaps a broader philosophy will give me back the sense of solidity and permanence in my surroundings.

The Twelfth Letter

“In my Father’s house are many mansions.”



I 2

HILLTON, August 21, 1905.

IN my last letter I set down nothing as truth, upon which scientific men are not substantially agreed. To-day I am going to portray for you a cosmos mainly speculative, yet based for the most part on the speculations of distinguished men of science, and consistent, I think, both with the greatest truths of science and with faith in eternal life. My purpose compels me to this, because, obviously, before I can show warrant in Nature for the theory of immortality, I must demonstrate the possibility of a scheme of things into which the theory will fit. It will not fit into a scheme which admits of limitations. In such a scheme, indeed, it would

be easy to find place for the annihilation of Nature's noblest achievement, but not in a cosmos consistent with the law of the conservation of energy and the law of evolution. The cosmos of the current thought, the cosmos necessarily conceived by any mind accepting the annihilation theory, is not consistent with those laws. It is a cosmos defined everywhere by limits; it consists of a mere finite host of spheres, which has been and is being built up out of determinate, indivisible atoms by the interaction of certain forms of energy transformable among themselves but constituting a closed circuit, and which floats in an infinite sea of otherwise undifferentiated substance conceived as the ultimate form of matter. Evidently this neatly finished affair cannot be the true cosmos; it is not an adequate expression of the One Infinite Mind; it expresses nothing more than the limitations of ingenious little man. Man seeks ultimates; he

is too conscious of his finiteness to be quite comfortable among infinities; appalled by the awful cosmic deeps about him, he hastens to fence them out with mete and bound of indivisible atom and ultimate form of matter, finite system of stars and closed circuit of energies, and pleases himself with the fancy that his little enclosure is the whole cosmos. But it will not do. The infinite breaks in; it will not abide by his fences. One after one his ultimates flow away before his eyes and leave him face to face with the gleaming deeps of illimitable mystery. Nature will brook no bar to her eternal unfolding, no *Thus far and no farther*. All her paths are paths into the infinite and thus run on forever. If any apparent barrier seems to check the progress of thought into the unknown, the barrier is due not to any limitation in Nature but to the limitations of human thought. It is a cloudy phantom of man's imagining.

For example, the ultimateness of the ether. Now, that notion has no sanction in the analogies of Nature. Nature knows nothing of ultimates; certainly not of ultimates so close to little man that he can grasp them in his thought and turn them to account in the heaping up of dollars. Once, we set our ultimate closer yet, — at our own form of matter. But Nature showed us that we had mistaken her way; that she had a whole world of matter within and beyond our own. Straightway, we set up that ethereal world for our new ultimate, and would none of a beyond. But to no purpose; the beyond beckons and the path runs on. Every discovery we make in Nature is only an indication of more of the kind farther on. The existence within our world of a world more tenuous than ours implies the existence within that of another more tenuous still, and, within that, another and another, on and on in endless evolution, the atom of

one tenuity being ever the gateway to the next, a multiplex compound of finer atoms. Thus what we call the ether is, in reality, an infinite reach of successive tenuitys of substance. In each tenuity all spaces are occupied by the substance of the worlds beyond, there being therefore no such thing as action at a distance, since there is no unoccupied space, the succession of tenuitys being infinite, or, rather, being one of the phases of that mysterious union between the One Energy and the one substance, which is beyond finite comprehension.

In the light of this conception, you will notice, the permanent atom loses its permanence and falls into harmony with the cosmic progression ; and as, in one direction, our minds move on, through sphere and system and ever greatening universe, into the realm of the infinitely great, so in the other, through crystal and molecule and ever lessening atom, they move on into the realm of the infinitely

little. No beginning, no end, follow what indication of Nature we may.

Thus, too, with the finite number of the stars. Finite indeed it is, according to the latest conclusions of our astronomy, but only finite in that it is the one term present to us of an infinite series of starry hosts, pulsing continually out of eternity on to eternity, the individual systems dropping away, but the line running on forever toward an absolutely perfect type. The number of stars to-day may be finite, and so to-morrow and to-morrow, but the sequence of these finites is infinite.

And the closed circuit of physical energies. Here indeed we seem to have arrived at a substantial barrier, looming vast across our way. But no, it is a phantom like the others. The finite, unable to approach the knowledge of the supreme law by which the One Energy translates itself into the one substance, cannot comprehend how psychic energies con-

nect with the energies of matter in the great circuit of evolution from the infinite into the infinite. But connect they must and do. The closed circuit of physical energies can be nothing more than one of the "still ascending and expanding gyres" of a spiral so vast we miss the curve, sweeping on from universe to universe with nowhere break or bar. For all things eternally become. The ways of Nature, the ways of the spirit, are ways of ceaseless evolution. No rest, no completion, no closed circuits. Still from eternity to eternity, out from God, on to God, sweeps the grand spiral of that mighty march in which all things finite join, which only the Infinite can comprehend. What we call our knowledge is only the glimpses we have caught into the mysteries of this eternal movement. Every extension of our knowledge can be only some new insight into the relations of seen phenomena to this mysterious and inconceivable reality, this ceaseless

progression of the finite out of and into the infinite.

Clearly, then, it is in no limited cosmos that we are to seek warrant for our faith in immortality. The cosmos with which we have to do is an infinite cosmos, the expression of an Infinite Energy. Its substance occupies all space, in ceaseless evolution from, in ceaseless progression towards, that Energy whose living presence it proclaims in ceaseless thrills of motion, — motion through whose infinite variety of modes a compelling law prevails, in obedience to which they dispose themselves in a sublime and beautiful order, an infinite array of harmonious aggregates. Or, to state the conception otherwise, — availing ourselves of those aids by which science makes thinkable these “un-thinkable conclusions,” — let us say that among the diverse motions with which the atoms of the cosmic substance are endowed, certain likenesses may exist as to rate, or

kind, or some such matter, whereby attractive forces are set up among atoms having like vibrations, in virtue of which such atoms tend to draw together from all space, thus differentiating the eternal substance into individualities or worlds, each world the totality of such cosmic atoms as have among their various motions one common mode of vibration. Of these worlds our own material universe is one. For the suggestion of the presence in Nature of these attractive, world-building forces, we are indebted to some experiments of the Russian physicist Bjerknes with bodies vibrating at the same musical pitch. He finds that such bodies are mutually attractive; and this establishment of the possibility of attraction by means of synchronous vibrations gives us a right to look for such attractions among the cosmic atoms.*

This seems a simple enough way of ac-

* Professor Shaler: *The Individual*.

counting for the breaking up of the cosmic substance into individual worlds, — worlds which, owing to our limited experience, we can conceive of only as differing tenuitys of matter. The resistless mutual attraction of synchronous vibration which draws like-moving atoms together is thus seen to be the world-force for each tenuity of matter. In our own tenuity we call it gravitation; and just as we see — or conceive — gravitation acting to build up and sustain our universe of matter, so we may conceive like cosmic forces acting to build up and sustain an infinite number of such universes. Thus the cosmos presents itself to our imagination as an ordered host of worlds or tenuitys of matter, worlds finer than ours, worlds grosser than ours, arranged perhaps in ever evolving series, refining and refining continually as they move on toward the Infinite Energy from which matter is somehow an evolution.

It is only with some such cosmos as this,

some cosmos wholly without limitation, that the law of immortality can consist. To such a cosmos the implications of the law of the conservation of energy point, it is in harmony with the law of evolution, and the new theory of gravitation fits it. Nature further corroborates the hypothesis by the abounding fullness of her beauty. She abhors a dreary vacuity of space. Age after age have her heavens been telling the glory of God and her firmament showing his handiwork. But no dull infinite of undifferentiated matter could ever tell God's glory, nor could the finite spheres of one poor universe body forth his infinite perfection. Nowhere in Nature do we find warrant for so poor a conception. Our own fair earth repels it, as with swift-changing splendors she makes way upon her bosom for the march of days and nights. As she glows with beauty before the face of sun and stars, so glows the cosmos in the light of the Living God. Nowhere a monotonous

vacuity of space, but everywhere a mighty host of trooping worlds ; nowhere pale glimmerings of scattered suns, but everywhere golden splendors of perfect light ; nowhere black abyssms of darkness and cold, but everywhere the serene depths of that peace which passeth understanding, the blessed presence of Eternal Love.

There is no practical difficulty in the way of the existence of many unseen cosmic worlds if we bear in mind the fact that though our limited resources of thought and speech compel us to think and speak of them as varying tenuitys of matter, yet they are in reality only varying harmonies of motion in the space-filling substance. It is true that behind all our knowing stands the fact that our knowing is itself an unthinkable thing ; that it somehow depends on that mysterious relation of perceiver and perceived which is one of the cosmic problems whose solution seems to be beyond human compre-

hension. It is true that we actually know nothing about the real existence of our own universe. But whatever the relations may be which bring our universe to our consciousness, they cannot be peculiar to our little sphere. They must be cosmic relations, and therefore capable of bringing all possible worlds to the consciousness of intelligences native to them. Just as our universe exists, be that way as it may, so may other universes exist.

Of life in these many worlds I have as yet said nothing. But a cosmos consistent with the law of immortality must wear, as its perfecting crown, the immortal jewel of life, self-conscious life. That mysterious association of psychic and physical forms of energy which, in our experience, reveals itself in the mind of man, is a cosmic association, and in worlds of a rarer tenuity of matter becomes, we must believe, a continually finer adjustment. Conscious being must take on ever

higher and higher forms as through world after world it mounts into the mystery of that Infinite Being which is the source, the sum, the end of life.

And may I dare, at length, to lead your thought upward to that Being, the Original and Immanent Energy toward whom all Nature and all spirit perpetually yearn? It was into the knowledge of that Being, the All-Creator and All-Sustainer, that the great seers of the last century opened the way, when, with patient toil, they made plain the tremendous truth that through eternal transformation the One Energy of the cosmos eternally persists, — the same yesterday, to-day, and forever, the Eternal One. Spheres and systems and universe are but its changing form. God, the One, is the sole existence. Now, in our low estate, we know him only as he reveals himself in the ordered motions of matter, and throughout countless ages we may never know him otherwise. But we seek

the One, we have no rest but in the One. Therefore we follow the grand law on into realms where matter has no place, realms beyond space and time. Therefore, O God Eternal, our faith looks up to thee, and by our faith we know that beyond the far tenuities of matter, — thy fleeting form, — the spirit shall return unto God who gave it, and God shall be all in all. For the Living God is an individual — is the individualized, the personal totality of all that is. He is the Absolute of that principle of individuality which man cannot define, but to express which is Nature's highest aim. And it is in virtue of his individuality that the ways of Nature and the ways of the spirit are his ways, the working out of his most perfect will. It is in virtue of his individuality that we call him Father and commune with him, aspiring from our mortal dust to the righteousness, the wisdom, the love, the inconceivable perfection that are absolute in

him. Thus it is in God that the cosmos completes itself. He is the All, he is the One; the Alpha and the Omega, the beginning and the end.

I know the cosmos of many worlds which I have sketched for you is very speculative, but so is every cosmic hypothesis, — cannot be otherwise. Yet do not fear that by launching out with me upon this seeming sea of speculation you have got to break away from all scientific moorings and venture upon a quite untried course. By no means. The assumption of many material worlds is not new. More than a hundred years ago an English scientist, Dr. Thomas Young, advanced the theory that an infinite number of unseen material worlds, of differing tenuities of matter, exists in space; and some thirty years ago the theory was, in its main outlines, endorsed and brought into harmony with modern science by two of the most eminent physicists of our day, Balfour Stewart and

Peter Guthrie Tait. A. R. Wallace, co-discoverer of natural selection, says : " There probably are other universes, perhaps of other kind of matter, subject to other laws, perhaps like our conception of the ether." And very likely many writers have expressed other phases of the same thought. So you see we are not venturing out of good scientific company in conceiving the cosmos to be an infinite reach of material worlds. Indeed, strange as it may seem, we are not compelled to part company with the theologians, for not a great while ago, Dr. Samuel D. McConnell set forth, in his *Evolution of Immortality*, very much the same doctrine.

I think, if it commends itself to you, you will find in it a cure for the unhappy sense of unreality which your glance into cosmic abysses has brought. By suddenly realizing the fact that our material environment is other than we are in the habit of regarding it, you have lost, for a time, your mental

adjustment to it. But continued thought will bring a finer and more complete adjustment. You will perceive that everything is real in virtue of the reality of the One of whom everything is a manifestation.

In my next letter I will show you, or try to show you, how, in this cosmos of many worlds, the law of immortality finds its place; how it is possible for the soul to be at once immortal and dependent upon a physical basis.

The Thirteenth Letter

"If a man die, shall he live again?"



I 3

NEW YORK, August 26, 1905.

MOST readily can I accept your hypothesis of a cosmos of many worlds.

Indeed I do not well see how I could accept any other. Life gains in dignity seen in such magnificent perspective.

And yet in all this evolution of worlds and of life, is it not the perfecting of the type rather than of the individual which appears to be Nature's chief care? Everywhere, it seems to me, the individual withers as the type is more and more. I perceive indeed that the idea of God, as the individualized or personal whole of cosmic energy, does somehow carry with it the suggestion of an infinite evolution of individuality as of the other

attributes of the One Being — thought, truth, love, beauty. But I cannot work out the suggestion. I cannot see in Nature, as you have taught me to read her testimonies, any way of realizing the conception implied in your idea of God, — the conception of the infinite continuance of those individuals which drop from the type-stem as it advances. You have shown me the many mansions. Now show me the pathway of the individual tending, through mansion after mansion, toward the Eternal One, whose individuality the mansions reveal. Show me how, though a man be dead, he yet shall live again.

The Fourteenth Letter

“ When this corruptible shall have put on incorruption, and this mortal shall have put on immortality, then shall be brought to pass the saying that is written, Death is swallowed up in victory. O death, where is thy sting? O grave, where is thy victory? ”



I 4

HILLTON, September 5, 1905.

YES, the individual passes indeed, but there is no such thing as death in all the kingdom of God. The stars in their courses do not chant the requiem of lowlier spheres, the bird does not sing from the tree-top the dirge of the humble lizard, nor does the majestic speech of man proclaim the sacrifice of simpler generations upon the altar of his greatness. It is but a careless ear that hears in Nature dirge or requiem or sacrificial hymn. Still through the ceaseless flow of change all things express the One who changeth never, — the Eternal Individual. If the one attribute of the Primal Energy which the cosmic process most stren-

uously seeks to express be its individuality, is it credible that Nature does really work through such wholesale waste of the individual as appears upon the surface? credible that while, for the physical energies of the organic individual, and even for its mere substance, death means only change, yet for the individuality itself — that sublime mystery which makes of the totality of cosmic energy the Very Present God — it means utter, hopeless annihilation? Is Nature's grandest result but a vapor, a breath, an evanescent thing? The implications of the law of the conservation of energy point to no such pitiful conclusion, nor do the mighty promises of the law of evolution. It is true that as the type advances the units drop out of the line. But they do not drop into nothingness. They cannot. Nature makes no such leaps even to accomplish her ends; certainly not then to accomplish no end. Each unit does duty, while need is, in

the type evolution of one world, then dies to that world in the act of adjusting itself to another, wherein again it helps to carry out the type-thought ; and thus on forever, ceaselessly working out its own destiny, while ceaselessly contributing to type-destiny in the worlds through which it passes.

How this transition from world to world is effected without the loss to the individual of his conscious identity, how, in other words, the immortality of the soul is reconcilable with the necessity of a physical basis for soul-life, I am now to show, or try to show.

What, in common speech is known as the next world, or the unseen world, must be that world of our series which, under the broad name, *the ether*, has become, to a certain extent, known to our science. It is that tenuity of matter of whose atoms the so-called atoms of our matter are composed. It is not, therefore, so remote from us that we can frame absolutely no conjecture as to

its possible conditions; for no two adjacent terms in any evolutionary series can differ absolutely one from the other. It is true that, by her slow accumulation of slight differences, Nature does, "in her long leisures," bring about enormous changes, but these changes are never sudden. For example, in the line of terrestrial organic evolution, we find between the two terms, slime-speck and Shakspeare, a difference in life-value that is practically infinite, but between slime-speck and amoeba no such difference appears. So with the series of refining tenuityes of matter: between any two widely sundered terms we may well conceive a difference comparable to the difference between slime-speck and Shakspeare, but between any two adjacent terms—as our world and the world beyond—the resemblance is likely to be tolerably close. What are Nature's phenomena in one world are presumably somewhat similar to her phenomena in the next, as golden-rod at one

point in a country road is presumptive evidence of golden-rod a half mile further on. Therefore I think we have a right to conjecture that the world next our own, though far from a mere ethereal reproduction of our own, does yet, in some fashion, follow its general lines; that its formative processes do so far correspond with those processes which have produced the great spheric individualities of our own universe that the ether pervading those individualities is not mere undifferentiated substance standing to them in a relation like that of the water included in a submerged lobster-trawl to the including trawl; instead, it is individualized as the including material spheres are themselves individualized; demarked from the universal ethereal substance as the spheres are themselves demarked from the material sea which embosoms them, — that undifferentiated part of our own universe which our science does not yet distinguish from the ether.

This correspondence need not be exact, — is not, probably. It does not follow, for instance, that because the sphere is the form assumed by the great masses of our matter, therefore the great masses of the ethereal world are likewise spherical; nor must I of necessity see, within that forest-clothed mountain-slope which bounds my view, just such another mountain, clothed with just such other forests. But I do see within that tranquil, earthly beauty, itself unspeakable, a serener beauty though I cannot guess its outlines; a beauty that eye hath not seen, nor ear heard, nor hath it entered into the heart of man to conceive; a beauty whose roots lie deep in those mysterious sympathies which link together, into one cosmic whole, the myriad harmonies of motion in the eternal substance.

The correspondences as to individualization which we have assumed to exist between the two tenuous in their non-living substance

must exist likewise in their living substance, and must here take on a form closer and deeper than any relation known to the inorganic. It is not impossible, indeed, that to some peculiar union between living bodies of our matter and potentially living bodies of finer matter indwelling within them, may be due those distinctive features of the protoplasmic compound which baffle our chemists and give to protoplasm its unique place in Nature as the only substance, known to terrestrial experience, fit to be the vehicle of life. Be that as it may, it is conceivable that the evolution of the living individual should mark the advent of a new possibility in Nature,—the possibility of a union between the material body and its ethereal tenant, such that the two constitute not one body merely, but one living body, actually alive in its material part, potentially alive in its ethereal part. To state it otherwise: in the organic individual the evolutionary process has achieved

an individual alive *clear through*, — through, that is to say, the whole series of bodies which we speak of as the ethereal body.

Before we go any farther, let us stop a moment, and consider what we mean by the term *alive*. Life and death are terms for which we have no satisfactory definitions. Perhaps Herbert Spencer's is still as good as any: Life is the continuous adjustment of internal relations to external relations. It is a capacity in the individual of responding, by means of molecular changes, to his environment. In the higher organic individuals, at least, it is that relation of perceiver and perceived which is due to a peculiar association of psychic energy with certain forms of physical energy. Death, then, must be the failure of internal relations to adjust themselves to external relations; a cessation of the individual's capacity of response to his environment; a readjustment of that association between physical and psychic forms of

energy upon which the relation of perceiver and perceived depends. When, therefore, I say the material organism is alive *clear through*, I mean that, though the material body is the only body which at the present moment actually responds to its environment, yet the latent capacity for such response inheres in each body in the ethereal series, ready to become actual upon the advent of the requisite stimulus, — the death of the outer body. The ethereal body, of course, is not affected by any of the agencies that operate to injure or destroy masses of our matter. Neither sword-blade nor bullet can divide it, the weight of all the seas cannot crush it, closest sealing cannot confine it. The ethereal body knows not the hurts of the material.

I do not see, therefore, why any organic individual should ever die. I do not think one ever does. Simply, when the death transformation overtakes it, and the material

body drops away, the next more tenuous body, flowing free, takes on new beauty as the new adjustment arises between it and the psychic energies released from their previous association. I am glad to feel, in my own mind, an assurance that this is so. It softens the tragedy in the fate of all those lowly, beautiful creatures which brighten yonder forest with their life and shadow it with their death.

Now, do not jump at the conclusion that I claim immortality for the brute as well as for the man. By no means. An organism may be deathless without having achieved immortality in the Christian sense of the word. In that sense, immortality becomes possible only with the evolution of a being capable of carrying into the life beyond, that memory of the previous life essential to the preservation of his individual identity. It is evident, therefore, that the individual's change from world to world may be many times effected before the evolution of true immor-

tality is reached. It certainly is not reached by terrestrial organisms which have not attained self-consciousness, — organisms lower than man, — nor, so far as our present experience enables us to judge, by organisms in realms infra-terrestrial. Personally I have no doubt that

“The soul that rises with us, our life’s star,
Hath had elsewhere its setting
And cometh from afar.”

But of those experiences afar we have no more recollection than a butterfly has of its chrysalid existence. Clearly, then, thus far in our series of worlds, the capacity for immortality has not been reached by any creature lower than man.

But that in man Nature has achieved this crowning triumph, there seems good reason to believe. It is not life alone which she has brought to light through protoplasm, but immortality as well. For protoplasm, continually differentiating into plasm adapted to

ever higher and higher uses, has at length, in the brain of man, achieved an apparatus capable of doing a two-fold work: first, of preserving a sustained and associated record of the sequence of changes it has undergone in the course of the self-conscious life of the individual, and second, of effecting so intimate a union with the finer brain included within it that the records imprinted in its own substance are imprinted likewise in the substance of that finer brain; thus securing to man that memory of his earthly experience essential to the continuance of self-conscious individuality beyond the tomb.

And thus we reach, at length, the reconciliation between the soul's immortal life and its dependence upon brain activity. Let me briefly summarize what I have said. The living individual is alive *clear through*, not only actually through his material body, but potentially through the series of ethereal bodies included within the material body and asso-

ciated in some mysterious way with it. Death is the ceasing of the material body to respond to the material environment; and when the response of the material body to the material environment ceases, the response of the next ethereal body to the next ethereal environment begins. In the human type, the evolutionary process has produced a brain-substance so delicate as to be capable of effecting a union with the more tenuous substance it includes, such that the finer brain receives and retains the records made in the cells of the grosser by that continuous sequence of transformations of energy concomitant with the continuous sequence of states of consciousness which we call the soul. Hence, in the death transformation, when the potential life of this finer brain becomes actual through the falling away of the material body, there is no break in consciousness; for death, in its main feature, is simply the readjustment of the soul to the physical

activities of the newly living brain, and in the substance of this newly living brain is imprinted that record of the individual's terrestrial life-experience which secures to him the continuance of his conscious individuality. Hence the uninterrupted wave of psycho-physical activity — or soul — flows continuously on in the more tenuous world as it flows on from day to day in this; and thus the immortal being moves consciously onward through successive tenuities of matter toward infinite freedom in the One Energy which transcends matter.

“O death, where is thy sting! O grave, where is thy victory!”

It is because I feel assured of the substantial truth of this hypothesis, that I bid you hope for your son an eternity of ever broadening life. To his development have gone ages of patient toil on Nature's part; that noble and beautiful personality was never

attained in twenty years or twenty centuries ; and to suppose it to have been attained only to be destroyed is to insult the Cosmic Mind. The thinking man — that exquisite adjustment of physical and psychic energies — is Nature's highest achievement. Having effected it, she is too good an economist to leave it, tremblingly unstable as from the delicacy of its poise it must be, to the mercy of every chance disturbance. A very slight impulse suffices to disturb that delicate poise and bring about the swift and sudden transformation of energy which we call death ; we may be sure, therefore, that, in the death transformation, Nature has provided, not an agent for the destruction of her precious product, but a most effective means for its higher evolution.

To our human comprehension the death transformation is a mystery. When its gray shadow falls upon the face of our beloved, we know in our desolation only that the heart

has ceased to beat, the brain to thrill. That is to say, we behold the material phenomena which accompany the transformation, the flowing away of the released physical energies into other modes of motion. But the change itself we behold not; the glorious revolution by which, at the touch of the inducing cause, the psychic energies flash into readjustment to the finer forms of physical energy in the next tenuity of matter, and the transformed being stands forth, radiant in the new robes of his greatened individuality — this we do not see, and so we weep as those who have no hope.

Be of good cheer, my friend. Your son is indeed dead to this world, yet hath he life in the world to come, and shall have it ever more abundantly, that so the will of God may be fulfilled in him.

And more; I bid you hope for a renewal of the sweet companionship which death has broken. For as to pass from one world to

the world adjacent, though doubtless a great change in conditions, cannot be to enter upon a totally different sphere of life, so neither can the individual who makes the transition become, in the instant of transformation, an altogether new being. He has, when death overtakes him, arrived, through age-long processes of evolution, at a certain level of life-value, and that level cannot be greatly altered in an instant of time. Hence he must continue his development substantially as he would have continued it had he remained in our world; and since, among the new conditions awaiting us in the next tenuity, we may reasonably expect a lengthened life-span to be one, you will, presumably, enter upon the next sphere before your son is ready to pass on. And so you will see him again; and should your death be a few years deferred, you will find him grandly fulfilling the noble promise of his young manhood. You may not stand to each other in

the old relation, for it may be that relations of the flesh die with the flesh; but in so far as you and he were spiritually akin, that kinship will assert itself in worlds having higher spiritual possibilities than ours, and you will know him, and commune with him, and love him, in the world that is to come.

“There is no death! What seems so is transition;
This life of mortal breath
Is but the suburb of the life elysian,
Whose portal we call death.”

The poet's vision may, however, be a little too deeply rose-tinted. I hardly believe conditions in the next world can be so different from conditions here as to make life in that world in any sense elysian. Nature, I repeat, makes no leaps. Not all the steps leading up to the unseen world are revealed to us, but we have a tolerably clear view of the eighty years next preceding, and we certainly do not discern therein enough of the elysian to justify us in expecting elysian conditions in the near

future. Our life on earth is a discipline, in which the bitterness of toil and conflict, defeat and pain and loss, is mingled in large measure with the honey of gladness. It is through suffering that perfection comes; and which of us is perfect? No, we must look forward to the life beyond, as, like this, a discipline, nor expect surcease of sorrow till sorrow's work is done, and in the peace of God that cometh with perfection, her blessed ministry shall end.

I do not see how there can be any communication between the inhabitants of different worlds, because I do not see how there can be any relation of perceiver and perceived between an observer of one tenuity and an environment of another. Moreover, I am sure that had there been any such possibility, my own dear ones who have passed on would have drawn near to me and given me some blessed intimation of their presence, especially in the first agony of parting. They

never have, therefore I think they never could. It is possible, probable indeed, that at the instant of transition, when the response to the material environment is just ceasing and the response to the ethereal just beginning, there may be a transient phase of dual response, when both worlds are present in consciousness at one and the same time. This would account for that flash of recognizing joy which sometimes lights the faces of the dying as the death-shadow falls. They see again the dear ones they have yearned after through all the years, and great peace comes with the vision.

Let us, then, dear friend, await with serene confidence our swiftly coming change; for we know that when our earthly house of this tabernacle is dissolved, we have a building of God, a house not made with hands, eternal in the heavens.

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